REMARKS

In the Official Action mailed on **July 19, 2004,** the Examiner reviewed claims 1, 3-14, and 16-21. Claims 1, 3-14, and 16-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakajima (USPN 5,269,012, hereinafter "Nakajima") in view of Knauer (USPN 4,751,675, hereinafter "Knauer").

Objections to the claims

Claim 14 was objected to because "re3spect" on line 4 should be "respect." Applicant has amended claim 14 to correct the misspelling.

Rejections under 35 U.S.C. § 103(a)

Independent claims 1, 9, and 14 were rejected as being unpatentable over Nakajima in view of Knauer. Examiner avers "Knauer discloses a last-in first-out ... memory, which operates asynchronously by allowing access to the cells of a data list in asynchronous fashion." Applicant respectfully points out that Knauer's buffer **requires significant external controls to operate.** For example, Knauer teaches a buffer requiring an access network (see FIG. 2) that includes a PM2I shifter to control pointers to the data list (see col. 3 lines 58-64). The PM2I shifter, in turn, requires a register for storing a relative address used to shift the pointers (see col. 3 line 65-col. 4 line 1 and FIG. 2). Along with the PM2I shifter, Knauer teaches a mode control bus to provide several important operating parameters for the buffer (see FIG. 2 and col. 5 line 7-17).

In contrast, the last-in first-out buffer disclosed in present invention **does not depend on external controls to operate**. External circuits are not necessary because the circuits that control data movements to and from each cell are contained within each cell in the last-in first-out buffer. Moreover, external control signals are not necessary because communication between the cells of the last-in first-out buffer occurs only between adjacent cells.

A last-in first-out buffer without external controls is advantageous because such a buffer is fast, compact and has a simple interface. Hence, the last-in first-out buffer proposed in the present invention can be used in applications where current last-in first-out buffer designs would not be able to satisfy timing and design complexity or area constraints.

There is nothing within Nakajima or Knauer, either separately or in concert, which suggests an asynchronous last-in first-out buffer that operates without external controls.

Accordingly, Applicant has amended independent claims 1, 9, and 14 to clarify that the present invention operates without external controls.

Hence, Applicant respectfully submits that independent claims 1, 9, and 14 as presently amended are in condition for allowance. Applicant also submits that claims 3-8, which depend upon claim 1, claims 10-13, which depend upon claim 9, and claims 16-21, which depend upon claim 14, are for the same reasons in condition for allowance and for reasons of the unique combinations recited in such claims.

CONCLUSION

It is submitted that the present application is presently in form for allowance. Such action is respectfully requested.

Respectfully submitted,

By 
A. Richard Park
Registration No. 41,241

Date: August 17, 2004

A. Richard Park
PARK, VAUGHAN & FLEMING LLP
508 Second Street, Suite 201
Davis, CA 95616-4692
Tel: (530) 759-1663
FAX: (530) 759-1665